



**Physical Science, Math & Engineering Division
Earth & Space Science Program - Dept. of Meteorology**

Logistical Information:

- **Course:** MET10.63Z - Weather & Climate Processes - Winter 2025
- **Instructor:** Bridget James
- **Class Location:** <http://deanza.instructure.com>
- **Office Hours:** Wednesdays and Thursdays 2 - 4 pm (instant replies through canvas or email)
- **E-mail:** jamesbridget@fhda.edu

Course Description:

Introduction to the principles of the sciences of meteorology and climatology, including the history of the sciences; origin, evolution, and structure of the atmosphere; major atmospheric variables that determine weather; global and local wind circulations; air masses and frontal systems; birth and development of extratropical and tropical cyclones and associated severe weather phenomena; weather map analysis and interpretation; objective techniques used by meteorologists to forecast weather; air pollution; atmospheric optics, global climate and the processes that produce climate change including "global warming."

Textbook & Materials Needed:

- Nugent, Alison, et al, 2020, Atmospheric Processes and Phenomenon, 1st Edition, Open Educational Resource:
<http://pressbooks-dev.oer.hawaii.edu/atmo/>
- Regular and reliable access to a computer with high-speed Internet.

Assignment Points Distribution

Assignment	Points per Assignment	Total Points Possible	Grade Weight (%)
Best 4 out of 5 Discussions	50 points each	200 points	20%
Best 10 out of 11 Module Activities	50 points each	500 points	50%
Midterm Project	150 points each	150 points	15%
Final Exam	150 points each	150 points	15%
Total points for term		1000 points	100%

Grading Scale

Grade	Points Needed	Grade	Points Needed
A+	1000-980	C	779-700
A	979-920	D+	699-680
A-	919-900	D	679-620
B+	899-880	D-	619-600
B-	819-800	F	Below 600
C+	799-780		

Schedule of Topics

Module	Title	Submission Dates
1	Orientation, Introduction to Weather & Climate	Mon, 1/6 - Sun, 1/12
2	Heat & Temperature	Mon, 1/13 - Sun, 1/19
3	Humidity, Condensation, and Clouds	Mon, 1/20 - Sun, 1/26*
4	Atmospheric Stability & Precipitation	Mon, 1/27 - Sun, 2/2
5	Air Pressure & Wind/ MIDTERM PROJECT	Mon, 2/3 - Sun, 2/9
6	Atmospheric Circulation & El Niño	Mon, 2/10 - Sun, 2/16**
7	Air Masses & Weather Fronts	Mon, 2/17 - Sun, 2/23**
8	Thunderstorms	Mon, 2/24 - Sun, 3/2
9	Hurricanes	Mon, 3/3 - Sun, 3/9
10	Climate Change, Part I	Mon, 3/10 - Sun, 3/16
11	Climate Change, Part II	Mon, 3/17 - Sun, 3/23
	FINAL EXAM	MONDAY, MARCH 24TH Take anywhere between 8 am and 11:59 pm

*Martin Luther King Jr. Holiday falls on Monday, January 20th. Module 3 will be open for those of you who would like to use this day to complete the assignments within Module 3.

**The Presidents holiday falls between February 14th - 17th. Module 6 and 7 will remain open for those of you who would like to use this period of time to complete assignments during the holiday.

Student Learning Outcomes (SLOs):

- Analyze and explain the objective techniques used by synoptic meteorologists and climatologists to forecast our planet's weather and to predict future changes in our planet's climate.
- Assess and critique the impact of meteorology and climatology as sciences on local, national, and international economic, environmental, ethical, and political issues, including climate change.

About Online Courses:

The content covered between an in-person and an online course is the same, but some benefits and challenges must be considered when taking an asynchronous online course such as this one. Asynchronous online courses offer much more flexibility in completing course material than other course modalities. However, you must have good self-discipline in promptly completing these tasks. Remember that the due date should never be the “do” date. Completing assignments well before the deadline will go a long way toward your success in this course. Use a calendar to set aside “class time” to satisfy course requirements. If your work schedule changes week-to-week, schedule your “class time” immediately after your work schedule is set. This proactive approach will greatly enhance your success in the course.

About Online Office Hours:

The time listed as "online office hours" is time dedicated to you. I will reply to your email within a few minutes during this time. We can discuss course assignments, topical interests, career choices focused on the planet we call home, or anything else to help you succeed in this course. Just send me an email to get the conversation started. I look forward to connecting with you! Office hours are Wednesdays and Thursdays 2 - 4 pm where I will respond within a few minutes. You can also contact me outside of office hours where I will respond within a few hours Monday-Thursday (between 8 am and 7 pm) and Sundays (4 pm - 7 pm).

Modules:

A module is a specific and discrete learning segment that leads to understanding a given topic in preparation for the final exam in this course. Modules will be assigned by topic on Canvas, which include 1.) Lectures; 2.) Reading; 3.) Module Activities. In addition to Module tasks, there will be Peer Discussion assignments, a Midterm Project, and a Final Exam for this course. Please read the instructions below for the details of each of these tasks.

Lectures:

Lectures will be presented online as PowerPoint presentations converted into a format that can be watched and listened to on YouTube ©. A link to each lecture will be provided. Like a traditional course, you will be expected to take notes while listening to the lecture. A benefit to a recorded lecture is that you can re-listen to any topic anytime. Any questions you may have during the lecture should also be written down immediately in your notebook. Sometimes, those questions answer themselves further in the lecture. What isn't answered should be e-mailed to me. Missing lectures can severely impact your ability to learn the course material, leading to a poor grade.

Exam questions almost always come directly from lectures, so be sure to discipline yourself to listen and take notes. Then, study the concepts learned in the lecture for the upcoming exam. Notes do not need to be submitted. Please keep those for reviewing purposes.

Peer Discussions (50 points each, 200 points total, 20% of your grade):

There will be five peer discussion assignments this term. The lowest-scored discussion assignment will be dropped from your final grade in the course. Discussion assignments for this course may be different from other courses you have taken. For this course, you are being graded on how well you are **engaging your peers** on the topic of Earth Sciences, and there are parameters to that engagement you will need to be aware of. **Please refer to the assignment instructions and grading rubric on Canvas for detailed expectations and requirements.**

Module Activities (50 points each, 500 total points, 50% of your grade):

There will be eleven module activities this semester. Module activities are individual formative assessments completed after reading the associated chapter within your textbook and listening to the lecture within the modules assigned that week. Module Activities are due on the date/time stated within the instructions of each assignment. These assignments are designed to help you understand important topics in the lecture. They can be both problem-solving and/or review questions based on the lecture and/or films watched. You will turn in these activities online on Canvas. Emailed assignments are not accepted for any reason. Each activity will have submission instructions.

If you have an urgent situation where you cannot submit an activity during its submission period, you may be granted a grace period of one week (at the instructors discretion) so that you may still complete the assignment without penalty. See the assignment on Canvas for details.

Midterm Project - Weathering the Future (150 points and 15% of your grade)

For this assignment, you will be watching the 53 minute film "Weathering the Future" from NOVA and answering the associated questions basing the answers you choose directly from the film. This assignment will give you a good overview of extreme weather in the United States, looking particularly at longer heat waves, more intense rainstorms, megafires, and droughts. Since this is a film produced for the general public, no weather or climate background is needed to complete this assignment. It will be due on **Sunday, February 9th, 2025 at 11:59 pm**, but you can complete the project at any time before its due date (recommended).

If you have an urgent situation where you cannot submit the Midterm Project during its submission period, you may be granted a grace period (at the instructors discretion) of one week so that you may still complete the assignment without penalty. See the assignment on Canvas for details.

Final Exam (150 points, 15% of your grade):

There will be one online (timed) cumulative final exam that will have 50 multiple-choice questions worth 3 points each. **The final exam will be administered online on Monday, March 24th, starting at 8 am.** You can take this 70-minute exam anytime on Monday, March

24th, after 8 am, but you may only take the exam one time. Be sure to take the exam as early as possible in the exam period so a last-minute emergency is not in the way of these valuable points. **Make-up exams are not offered for reason, including emergencies.**

You may use notes while you take the exam, but because the exam is timed once you start it, you should master the subjects you are being tested on before attempting the exam so that you can finish in plenty of time. I highly recommend having only a small index card worth of notes nearby. Spending time going through the Internet, the textbook, or any other source for answers while taking the exam does not indicate comprehension of the subject, so this online exam must be timed to prevent heavy reliance on such sources. Much like a classroom exam, once you submit your answers, the answers will not be available immediately. Once the exam period ends, scores will be released within 48 hours unless otherwise noted.

Important note on final grades and extra credit:

- Grades are non-negotiable. They are final.
- Incompletes are never assigned.
- Extra credit is never assigned.
- Assignments and exams will not be "re-opened" for any reason.
- Requests to raise a letter grade are never considered for any reason.

Accessibility Accommodations:

Students with disabilities who need reasonable accommodations are encouraged to contact the instructor and/or DSS. Disability Support Services (DSS) will facilitate the reasonable accommodations process. DSS is located in SCS 41 and can be reached by telephone (Voice 408-864-8753/TTY 408-864-8748).

Policy on Academic Dishonesty:

There is a presumption and expectation that all work submitted is above board and honest. If cheating or plagiarism is discovered on any assignment in this course, a student will receive a "zero" at minimum when grades are released or retroactively if discovered after grades are released. The college will also be notified for further action. For more information on academic dishonesty, please see the college catalog.

Important note about travel:

It is assumed that you are completing this course at home in the U.S. and have excellent Internet access for the entire semester. If you need to travel, whether inside or outside the U.S., it will be your responsibility to ensure you have access to the course and all its assignments. All assignments, including exams, cannot be extended for you because you choose or need to travel for any extended period during the semester, even if that reason is out of your control. It's important to note that many countries outside of the U.S. block the use of YouTube and the ability to watch U.S. documentaries. If you plan on traveling to a country with these limitations, dropping this course and taking it during a term you will not be traveling is best. Also, please note that all dates and times given in this course are in Pacific Time unless otherwise noted.

Important note on attendance:

If you have yet to log into the course on Canvas within 48 hours of the start of instruction, I reserve the right to drop you from the course. I also reserve the right to drop any student who has yet to log into the course website and/or complete any assignments by the end of the first week. However, it is always the student's responsibility to drop a course they are no longer attending.

The drop deadline for Winter 2025 is Sunday, January 19th, 2025, and the last day to drop with a "W" on your record is Friday, February 28th, 2025.

Statement on Sexual Violence

De Anza College is committed to maintaining a safe and caring college environment. The college has established policies and procedures regarding sexual misconduct, harassment, and assault. A Title IX website has also been developed which provides you with important information about sexual misconduct and sexual assault. That website address is

<http://www.deanza.edu/titleix/>

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Office Hours:

W,TH 02:00 PM 04:00 PM Canvas,Email